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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/552,418	02/01/2006	Takeshi Okubo	2005-1532A	8294
513 7590 05/30/2007 WENDEROTH, LIND & PONACK, L.L.P. 2033 K STREET N. W. SUITE 800 WASHINGTON, DC 20006-1021			EXAMINER GEDEON, BRIAN T	
			ART UNIT 3766	PAPER NUMBER
			MAIL DATE 05/30/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/552,418

Applicant(s)

OKUBO ET AL.

Examiner

Brian T. Gedeon

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☒ Claim(s) 1-19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 10/6/2005
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Specification***

1. The disclosure is objected to because of the following informalities: It appears that the disclosure may have been machine translated, resulting in grammatical and spelling mistakes.

Appropriate correction is required.

### ***Claim Objections***

2. Claims 1-19 are objected to because of the following informalities: It appears that the claim may have been machine translated, resulting in grammatical and spelling mistakes. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 3-6, 9, 12, 15, and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Fremerey (US Patent no. 6,368,075).

In regard to claim 1, Fremerey discloses a pump for sensitive liquids such as blood, col 1 lines 9-12. The pump has a cylindrical tube housing 2, within is a rotor 3 with a rotor hub 4. On the hub 4 are fins or vanes 5 and 6 that serve as the impeller to

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displace fluid through the tube 2. The tube 2 contains a front side (i.e., and inlet) and an rear side (i.e., and outlet), between which, the rotor 3 and rotor hub 4 are located.

Radial stabilizers 10 and 11 serve as a fixed axial body, and extend from the rear and front sides of the rotor 3 and rotor hub 4. Elements 12, 13, 14, and 15, serve as board shaped elements protruding from an inner wall of tube 2 and fixed radial stabilizer elements 10, 11. The elements 12, 13, 14, and 15 appear both on the rear and front side of the rotor 3, 4, col 5 lines 39-47. Radial stabilizer elements 10 and 11, serving as the fixed axial body, have stabilizer sleeves 16 and 17. The sleeves 16 and 17 contain magnets 18 and 19. Ferromagnetic flux guide pieces 20 and 21 cooperate with ring-shaped electric magnets 22 and 23 and arranged externally around the tube housing 2.

In regard to claims 3, 6, 15, and 18, ring shaped electric magnet coils 22 and 23 are arranged around annularly around the housing tube 2.

In regard to claims 4 and 9, radial stabilizer elements 10 and 11 are located on either the rear side or front side of the rotor/impeller unit 3, 4, 5, 6 (depending on the origin of reference). The radial elements 10, 11 serve as the fixed axial body and have sleeves 16 and 17 that contain stator magnets 18 and 19, which are described as permanent magnets, col 5 lines 45-53. The magnets 18 and 19 are magnetized in such a manner as to both be attracted to the rotor, col 5 lines 47-53, which implies that magnets 18 and 19 have the same polarity.

In regard to claims 5 and 12, the magnets are characterized as permanent magnets, col 5 lines 47-49.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2, 7, 8, 10, 11, 13, 14, 16, 17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fremerey (US Patent no. 6,368,075) in view of Issacson et al. (US Patent no. 5,211,546).

In regard to claim 2, Fremerey substantially describe the invention as claimed except for the thrust grooves located surfaces of the fixed axial body. Issacson et al. in a similar field of endeavor, shows thrust bearing grooves on a rotor of a blood pump, figures 12a-12g and 13a-13d. Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the rotor of Fremerey with the thrust bearing grooves of Issacson in order to axially support the rotor in a hydrodynamic manner, Issacson col 17 lines 64 – col 18 line 5.

In regard to claims 7, 13, 14, 16, 17 and 19, ring shaped electric magnet coils 22 and 23 are arranged around annularly around the housing tube 2.

In regard to claims 8 and 10, radial stabilizer elements 10 and 11 are located on either the rear side or front side of the rotor/impeller unit 3, 4, 5, 6 (depending on the origin of reference). The radial elements 10, 11 serve as the fixed axial body and have sleeves 16 and 17 that contain stator magnets 18 and 19, which are described as

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permanent magnets, col 5 lines 45-53. The magnets 18 and 19 are magnetized in such a manner as to both be attracted to the rotor, col 5 lines 47-53, which implies that magnets 18 and 19 have the same polarity.

In regard to claims 11 and 13, the magnets are characterized as permanent magnets, col 5 lines 47-49.

### ***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian T. Gedeon whose telephone number is (571) 272-3447. The examiner can normally be reached on M-F 8:30-5:00.

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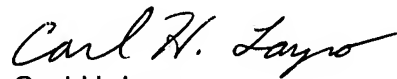
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl H. Layno can be reached on (571) 272-4949. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Brian T. Gedeon  
Patent Examiner  
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Carl H. Layno  
Acting Supervisory Patent Examiner  
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BTG

CARL LAYNO  
PRIMARY EXAMINER